

**CLAIMS**

1. Signal processing apparatus (100), comprising:  
tuning means (10, 15, 20, 25, 30) for generating first and second IF  
5 signals;  
first AGC means (40) for generating a first AGC signal responsive to  
said first IF signal;  
second AGC means (50) for generating a second AGC signal  
responsive to said second IF signal;  
10 third AGC means (60) for generating a third AGC signal responsive to  
at least one of said first and second IF signals; and  
switching means (70) for selectively providing one of said first, second  
and third AGC signals to said tuning means (10, 15, 20, 25, 30) responsive to a  
predetermined condition.  
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2. The signal processing apparatus (100) of claim 1, wherein:  
said first IF signal represents an analog channel; and  
said first AGC means (40) comprises an analog demodulator.
- 20 3. The signal processing apparatus (100) of claim 1, wherein:  
said second IF signal represents a digital channel; and  
said second AGC means (50) comprises a digital demodulator.
4. The signal processing apparatus (100) of claim 1, wherein said third  
25 AGC means (60) comprises a wide band AGC detector.
5. The signal processing apparatus (100) of claim 1, further comprising  
processing means (90) for outputting a control signal that causes said switching  
means (70) to provide one of said first, second and third AGC signals.  
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6. The signal processing apparatus (100) of claim 1, wherein:  
said first and second AGC signals are narrow band signals; and  
said third AGC signal is a wide band signal.

7. A method (200) for providing an AGC function, comprising:  
using a tuner to generate one of first and second IF signals (210);  
generating a first AGC signal responsive to said first IF signal (230);  
5 generating a second AGC signal responsive to said second IF signal  
(270);  
generating a third AGC signal responsive to at least one of said first and  
second IF signals (280); and  
using a switch to selectively provide one of said first, second and third  
10 AGC signals to said tuner responsive to a predetermined condition.

8. The method (200) of claim 7, wherein said first IF signal represents an  
analog channel.

15 9. The method (200) of claim 7, wherein said second IF signal represents  
a digital channel.

10. The method (200) of claim 7, further comprised of generating a control  
signal that causes said switch to provide one of said first, second and third AGC  
20 signals.

11. The method (200) of claim 7, wherein:  
said first and second AGC signals are narrow band signals; and  
said third AGC signal is a wide band signal.

25 12. A television signal receiver (100), comprising:  
a tuner (10, 15, 20, 25, 30) operative to generate first and second IF  
signals;  
a first demodulator (40) operative to generate a first AGC signal  
30 responsive to said first IF signal;  
a second demodulator (50) operative to generate a second AGC signal  
responsive to said second IF signal;

a wide band AGC detector (60) operative to generate a third AGC signal responsive to at least one of said first and second IF signals; and

a switch (70) operative to selectively provide one of said first, second and third AGC signals to said tuner (10, 15, 20, 25, 30) responsive to a  
5 predetermined condition.

13. The television signal receiver (100) of claim 12, wherein:  
said first IF signal represents an analog channel; and  
said first demodulator (40) comprises an analog demodulator.

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14. The television signal receiver (100) of claim 12, wherein:  
said second IF signal represents a digital channel; and  
said second demodulator (50) comprises a digital demodulator.

15. The television signal receiver (100) of claim 12, further comprising a  
processor (90) operative to output a control signal that causes said switch (70) to  
provide one of said first, second and third AGC signals.

16. The television signal receiver (100) of claim 12, wherein:  
said first and second AGC signals are narrow band signals; and  
said third AGC signal is a wide band signal.

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